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<b>(21) International Application Number:</b> PCT/EP00/01903 <b>(22) International Filing Date:</b> 3 March 2000 (03.03.00) <b>(30) Priority Data:</b> 99104519.6 6 March 1999 (06.03.99) EP <b>(71) Applicant (for all designated States except US):</b> ARTEMIS PHARMACEUTICALS GMBH [DE/DE]; Neurather Ring 1, D-51063 Köln (DE). <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> HOBOM, Gerd [DE/DE]; Arndtstrasse 14, D-35392 Giessen (DE). FLICK, Ramon [DE/SE]; Lilla Hallsattravägen 28, S-137 93 Västerhaninge (SE). MENKE, Anette [DE/DE]; Ockershäuser Allee 7, D-35037 Marburg (DE). AZZEH, Maysa [IL/DE]; Al-tenfeldsweg 32, D-35394 Giessen (DE). <b>(74) Agents:</b> HELBING, Jörg et al.; Von Kreisler Selting Werner, Deichmannhaus am Dom, D-50667 Köln (DE).		<b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
<b>(54) Title:</b> STABLE RECOMBINANT INFLUENZA VIRUSES FREE OF HELPER VIRUSES <b>(57) Abstract</b> <p>The invention relates to a recombinant influenza virus for high-yield expression of incorporated foreign gene(s), which is genetically stable in the absence of any helper virus and which comprises at least one viral RNA segment being an ambisense RNA molecule (ambisense RNA segment) and containing one of the standard viral genes in sense orientation and a foreign, recombinant gene in anti-sense orientation, or <i>vice versa</i>, in overall convergent arrangement. The present invention further provides a method for the production of said recombinant influenza virus, a method for constructing specific ribozyme-sensitive influenza carrier strains; pharmaceutical compositions comprising said recombinant influenza virus; and the use of said recombinant influenza virus for preparing medicaments for vaccination purposes.</p>		